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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,779	07/27/2001	Ronald J. Skrzyniarz	1945.BDM	8792
7590 Cynthia L. Foulke NATIONAL STARCH AND CHEMICAL COMPANY 10 Finderne Avenue Bridgewater, NJ 08807-0500			EXAMINER CHANG, VICTOR S	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 12/27/2007	DELIVERY MODE PAPER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/916,779
Filing Date: July 27, 2001
Appellant(s): SKRZYNIARZ ET AL.

Cynthia Foulke
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10/30/2007 appealing from the Office action mailed 10/2/2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 3,891,788	Karszes	6-1975
US 5,804,618	Mofati et al.	9-1998

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

I. Claims 12-14 and 21 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Karszes [US 3891788].

Karszes' invention relates to adhering laminates, which is made by laying up and consolidating under heat and pressure resin impregnated laminae (high pressure laminates, HPL), to substrates using a wide range of adhesives [col. 1, ll 4-12; col. 2, ll. 15]. The laminates are adhered to a substrate such as plywood, particle board (wood composite), etc., and are used as countertops, flooring, etc., with a coating of adhesives such as white glues (emulsion adhesive) of polyvinyl acetate, etc. [col. 2, lines 15-27]. The adhesive coating materials can optionally contain various additives such as defoamers, filler, dispersers, etc. [col. 3, ll. 20-23].

For claims 12 and 13, Karszes teaches substantially the same subject matter, and for the same utility as the claimed invention. Karszes lacks a teaching of a manufacturing process of using a foamed adhesive to adhere the HPL to a wood composite substrate. However, the method limitation has not been shown on the record to produce a patentably distinct article, the formed article is rendered *prima facie* obvious. A careful review throughout the specification of the present application reveals no credible evidence whatsoever of a distinct structural and/or composition feature being obtained by the process step of using a foamed adhesive. In particular, the specification lacks any showing that the foamed adhesive, used during the manufacturing process, retains any of its transient foam structure in the resultant article after the aqueous emulsion adhesive is dried in the processing oven. The comparative results in Table 1 of the present application merely shows that the 40% foamed adhesives respond to temperature profile in a drying oven differently from an unfoamed adhesive, with the pull value peaks at a middle temperature profile. Notably, under the first and last temperature profiles the 40% foamed adhesives produce samples having less pull values than the sample made with unfoamed

adhesive. Clearly, Table 1 fails to provide any credible evidence that the resultant articles of claimed invention are necessarily structurally and/or compositionally distinguishable from Karszes' invention.

For claim 14, since Karszes' white glue (emulsion adhesive) polyvinyl acetate is inherently a blend (mixture) of a plurality of molecules of polyvinyl acetate, it reads on the recited limitation "a blend of at least two polyvinyl acetates". Alternatively, absence of any structural and/or chemical property differences between the "two polyvinyl acetates", the recited limitation does not preclude a single polyvinyl acetate homopolymer of Karszes to read on both of the recited polyvinyl acetates. For example, the "initial" and the "final" portions of polyvinyl acetate emulsion being measured for making the adhesive coating material read on the term "two polyvinyl acetates".

For claim 21, since the product-by-process limitations of preparing polyvinyl acetate by "batch polymerization" and "continuous polymerization" have not been shown to produce polyvinyl acetates which are materially different Karszes' polyvinyl acetates, the formed articles are also rendered *prima facie* obvious, and these limitations at the present time have not been given patentable weight.

II. Claims 12-17, 21 and 22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mafoti et al. [US 5804618].

Mafoti's invention relates to polyvinyl acetate emulsion based adhesives useful for bonding melamine formaldehyde resin treated decorative solid color and print paper to particle board (wood composite). The polyvinyl acetate emulsion based adhesive is formulated with tackified polyvinyl alcohol, starch, a tackifier and a coupling agent [abstract]. The melamine formaldehyde resin treated decorative solid color and print paper is a decorative high pressure

laminate [col. 1, line 66 through col. 2, line 12]. The polyvinyl acetate adhesive is formulated with about 20-35 percent starch solids. Preferably the starch is corn starch particles [col. 4, ll. 17-20].

For claims 12 and 13, Mafoti teaches substantially the same subject matter, and for the same utility as the claimed invention. Mofati lacks a teaching of a manufacturing process of using a foamed adhesive to adhere the HPL to a wood composite substrate. However, the method limitation has not been shown on the record to produce a patentably distinct article, the formed article is rendered *prima facie* obvious. A careful review throughout the specification of the present application reveals no credible evidence whatsoever of a distinct structural and/or composition feature being obtained by the process step of using a foamed adhesive. In particular, the specification lacks any showing that the foamed adhesive, used during the manufacturing process, retains any of its transient foam structure in the resultant article after the aqueous emulsion adhesive is dried in the processing oven. The comparative results in Table 1 of the present application merely shows that the 40% foamed adhesives respond to temperature profile in a drying oven differently from an unfoamed adhesive, with the pull value peaks at a middle temperature profile. Notably, under the first and last temperature profiles the 40% foamed adhesives produce samples having less pull values than the sample made with unfoamed adhesive. Clearly, Table 1 fails to provide any credible evidence that the resultant articles of claimed invention are necessarily structurally and/or compositionally distinguishable from Mofati's invention.

For claims 14-16, since Mafoti's polyvinyl acetate emulsion is inherently a blend (mixture) of a plurality of polyvinyl acetate molecules, it reads on the recited limitation "a blend of at least two polyvinyl acetates". Alternatively, absence of any structural and/or chemical

property differences between the “two polyvinyl acetates”, the recited limitation does not preclude a single polyvinyl acetate homopolymer of Karszes to read on both of the recited polyvinyl acetates. For example, the “initial” and the “final” portions of polyvinyl acetate emulsion being measured for making the adhesive coating material read on the term “two polyvinyl acetates”.

For claim 17, Mafoti teaches the inclusion of a defoamer in the polyvinyl acetate emulsion based adhesive formulation [col. 5, line 5].

For claim 21, since the product-by-process limitations of preparing polyvinyl acetate by “batch polymerization” and “continuous polymerization” have not been shown to produce polyvinyl acetates which are materially different Karszes’ polyvinyl acetates, the formed articles are also rendered *prima facie* obvious, and these limitations at the present time have not been given patentable weight.

For claim 22, Mafoti teaches that the suitable amounts of vinyl acetate homopolymer emulsion and starch are in the ranges of 69-88 and 5-24 wt%, respectively [col. 8, lines 50-57].

III. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Karszes (US 3891788) in view of Mafoti et al. (US 5804618).

The teachings of prior art are again relied upon as set forth above.

For claim 18, since Karszes teaches that the adhesive coating materials can optionally contain various additives such as filler, etc., it would have been obvious to one of ordinary skill in the art to modify Karszes’ polyvinyl acetate adhesive of with the starch filler taught by Mafoti, motivated by the desire to obtain the same beneficial effect to bond a high pressure laminate to a substrate such as plywood, particle board (wood composite), etc., for use as countertops.

Alternatively, since Mofati renders the claimed article obvious, as set forth above, and Karszes

teaches the article can be used as countertop, etc., the combined teachings of prior art render the claimed usage as a countertop obvious.

(10) Response to Argument

Pointing to various sections of disclosure in the specification, appellants argue at Brief page 4 that

“As disclosed in the subject application, a product prepared using a foamed adhesive unexpectedly results in a product that has the same strength, yet requires less adhesive. Karszes neither discloses nor suggest that an adhesive may be foamed and used to bond a wood composite to a high pressure laminate in the manufacture of products such as, for examples, countertops. A product prepared using an amount of wet adhesive is clearly different than a product prepared using an adhesive that has been foamed. The product is not only different when it is newly made, i.e. - a newly laminated product will be less wet, but will be different after the adhesive has fully dried, i.e., the final dry product will contain less adhesive residue and will show the presence of air voids in through out the dried adhesives.”

However, Karszes does teach a final dry product for use as a countertop. Regarding appellants’ argument that “a product prepared using a foamed adhesive unexpectedly results in a product that has the same strength, yet requires less adhesive,” it is noted that the claimed article is not limited by the adhesive strength and the amount of adhesive, because these properties are not recited in any claims. For example, the total mount of adhesive in a foamed adhesive used to form the final dry product could be higher than an unfoamed adhesive used in a typical lamination process. Further, the examiner asserts that, a workable adhesion strength (such as pull value) and amount of adhesive between the HPL and substrate are deemed to be either anticipated, or obviously provided by practicing the invention of prior art for the same utility. The claimed invention fails to exclude Karszes’ invention. Furthermore, contrary to appellants’ argument, Table 1 of appellants’ own specification shows that a final dry product made by an unfoamed adhesive could have a higher bonding strength (pull value) than samples made by

using a 40% foamed adhesive. Finally, appellants' statement that "the final dry product ... will show the presence of air voids in through out the dried adhesives" appears to be mere allegation by the attorney. No evidence whatsoever throughout the specification can be found to substantiate that the foamed adhesive used during the manufacturing process retains a foamed or voided structure, after being dried in the oven, in the final dry product, nor the attorney presented any factual support in the record. The examiner holds that the foam adhesive collapses during drying, and no foam structure is present in the final dry product, which is consistent with the adhesion strength (pull value) provided in Appellants' Table 1, otherwise one skilled in the art of adhesive would have expected a weakened adhesion strength by a voided structure. Hence, the examiner maintains that since the method limitation has not been shown on the record to produce a patentably distinct article, the formed article is rendered *prima facie* obvious.

Finally, since appellants' arguments at pages 7-11 over the Mofati reference are the same as arguments over the Karszes reference, they are unpersuasive for the same reasons as set forth above.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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